3Com® Router 6000 Family

DATA SHEET

- Built for the enterprise environment
- Efficient and streamlined single code base
- Flexible and feature-rich enterprise performance from the LAN to the WAN

Key Benefits

The 3Com® Router 6000 family offers flexible, feature-rich resilient routing, from the core to the edge, delivering WAN connectivity at a competitive value. A convenient hot-swappable modular design allows easy installation and maintenance and flexible expansion options. These routers integrate seamlessly into existing networks to facilitate keeping pace with rapidly changing business needs. Organizations gain easily managed, robust networks for reliable support of their key business applications.

Flexible and Resilient Design

The Router 6000 family offers an attractive network solution for enterprises wanting to maximize throughput and resiliency from the core to the edge. The flexible modular design of the 3Com Router 6040 and Router 6080 offers multiple configuration options with a variety of LAN and WAN interfaces that adhere to strict industry specifications. Interface modules, known as Flexible Interface Cards (FICs), provide LAN and WAN support for high-speed serial, T1/E1, T3/E3, ISDN PRI, asynchronous transfer mode (ATM), and asymmetric digital subscriber line (ADSL), as well as a variety of Ethernet options.

The Router 6040 is housed in a 3U chassis with four FIC slots; the Router 6080 comes in a 5U chassis with eight FIC slots for maximum flexibility and growth. For maximum uptime, both routers offer two embedded 10BASE-T/100BASE-TX ports, hot-swappable FIC, and fan and power supply modules. Powering down the router is not necessary when changing these components.

Feature-Rich, Full Routing

The Router 6000 family helps enhance ROI—protecting your purchase investment and eliminating hidden upgrade costs by providing maximum operating memory, a complete routing and security suite, and robust applications set. The router is designed to meet present and future needs without system memory or software upgrade purchases; no late-night upgrades or unplanned downtime are needed.

The routers include the full complement of SDRAM and FLASH memory*to support dual software images. This features assists in recovery and provides rollback capabilities. Also included as standard are: IP and IPX Routing, OSPF, RIP V1/2, integrated IS-IS, multicast routing, Quality of Service (QoS), IEEE 802.1Q VLAN, stateful packet inspection firewall, IPSec, BGP-4 and MPLS VPN.

* Routers 6040 and 6080 supplied with currently available maximum of 512MB SDRAM.

Features

Enterprise-Class Features

The 3Com Router 6000 family supports enterprise-level routing with:

- Advanced security and control
- Voice and data integration
- Standards-based interoperability
- Next-generation network readiness
- Easy deployment and management
- World-class service, support, and training
- End-to-end solutions

Advanced Security and Control

Today's enterprises can reduce operational spending by utilizing a mix of public and private high-speed WAN connections. By deploying an Internet-based WAN strategy, a business can take advantage of available high-bandwidth, yet low-cost offerings. However, the public Internet can open your organization to numerous security threats.

The 3Com Router 6000 family helps secure sensitive client and company information against unauthorized access by incorporating 3Com's layered approach to security. These security and control features include AAA, RADIUS authentication support, stateful packet inspection firewall, denial of service blocking (DoS), Access Control Lists (ACLs). L2TP and IPSec VPNs with 3DES and AES encryption further help provide secure networks.

The embedded stateful packet inspection firewall also includes support for ACLs, GRE (generic routing encapsulation), NAT (network address translation), and NAT traversal and application-specific firewalls, allowing mission-critical business applications to operate through the firewall and across the VPN.

Voice and Data Integration

The Router 6000 family delivers advanced Quality of Service (QoS), including DiffServ support for traffic management capabilities. Utilizing IP differentiated services for applications, the routers are equipped to handle the most demanding voice and data networking, helping assure the level of service required for business operations.

Bundled with IEEE 802.1p prioritization and IEEE 802.1Q VLAN support, the routers help provide the service levels required to maintain expected quality and productivity; for example, just the right bandwidth and frame latency for delay-sensitive traffic and applications such as voice over IP or video. The network is enabled to effectively expedite application and data delivery—even during times of heavy network use.

Standards-Based and Interoperable

3Com routers can be confidently used in a mixed-vendor network, as they have been designed to be standards-compliant and interoperable. Internal and independent third party testing enable these routers to display the "3Com Industry Standards Compliant Tested" mark of distinction.

Next-Generation Network Ready

Utilizing Multiprotocol Label Switching (MPLS) in the Router 6000, larger enterprises can simplify the routing configuration of an existing network infrastructure and provide scalable Layer 2 or Layer 3 VPNs throughout their corporate network. This benefit can increase network efficiency in delivering services that utilize MPLS.

Management & Provisioning

GUI management of the router is supported by 3Com Router Manager, included† with 3Com Network Director and 3Com Network Administrator. Together, these applications provide sophisticated router management including bulk-updating of remote router code and configuration backup, auto-trap setup and monitoring, router system status and historical reporting.

An intuitive and easy-to-use CLI interface can be accessed directly, or remotely via Telnet, Secure Shell or Rlogin; other management applications may also be used. In addition, the Info Center diagnostic tool, available through the CLI interface, quickly diagnoses trouble spots and reports back for quick and immediate action.

World-Class Service, Support and Training

The 3Com Router 6000 family is backed by 3Com Global Services and its authorized partners' expertise in assessment, implementation, and maintenance of your network. Trained personnel—competent in a variety of network environments—provide assistance through all phases of the network lifecycle with services that include, but are not limited to, project management, troubleshooting, and training.

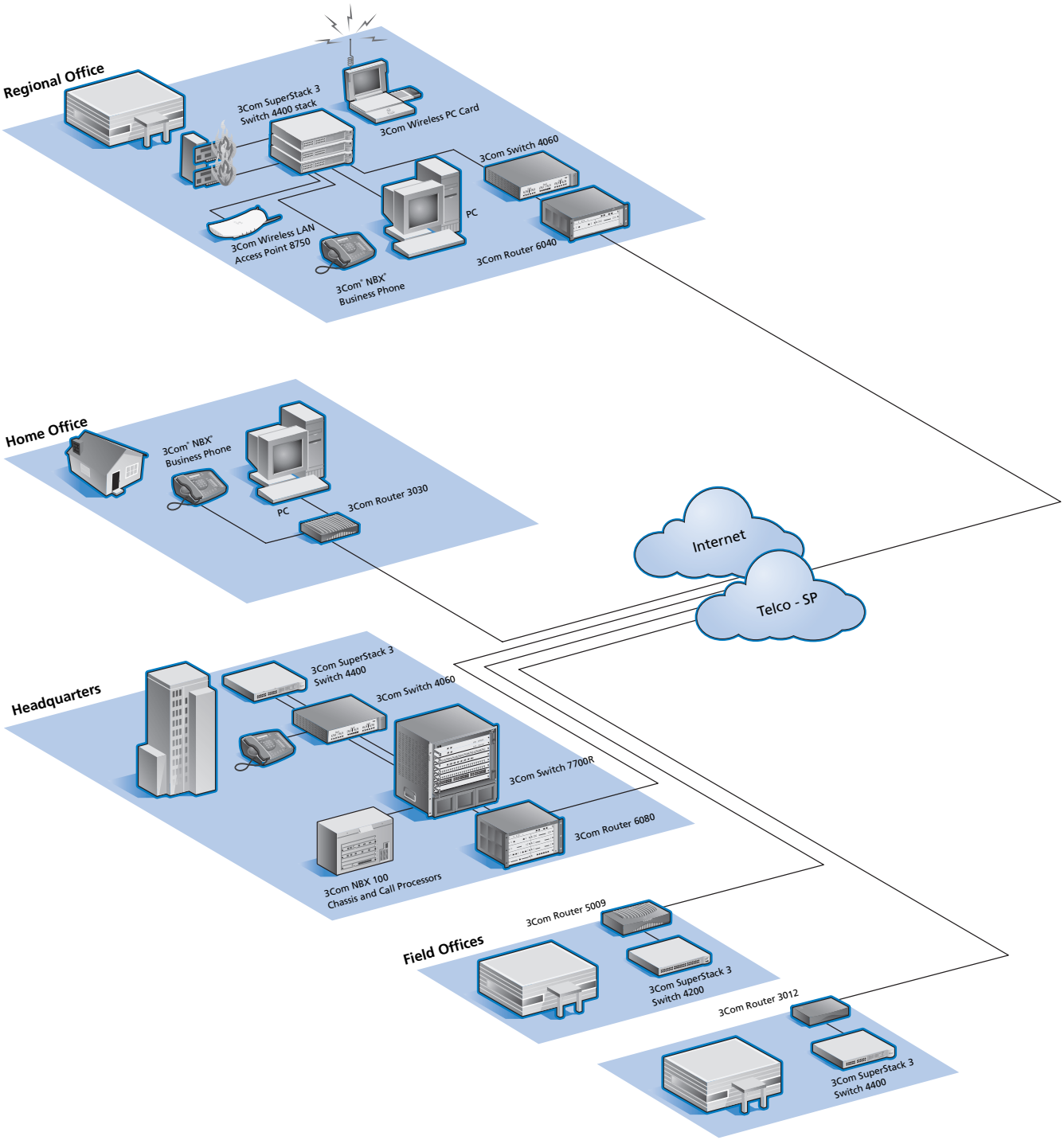
End-to-End Solutions

The Router 6000 family complements a broad portfolio of 3Com small office and enterprise LAN and WAN solutions: OfficeConnect® routers, firewalls and switches for small offices, and the 3Com Router 3000 and 5000 families, SuperStack® switches, 3Com Switch 40x0 and 7700, and VCX™ and NBX® voice solutions for enterprises.

†Available as an optional purchase

Enterprise Use of 3Com Routers

The 3Com family of routers offer flexible and feature-rich platforms that are perfect from the network core to remote sites and locations.



3Com Router 6000 Family Highlights

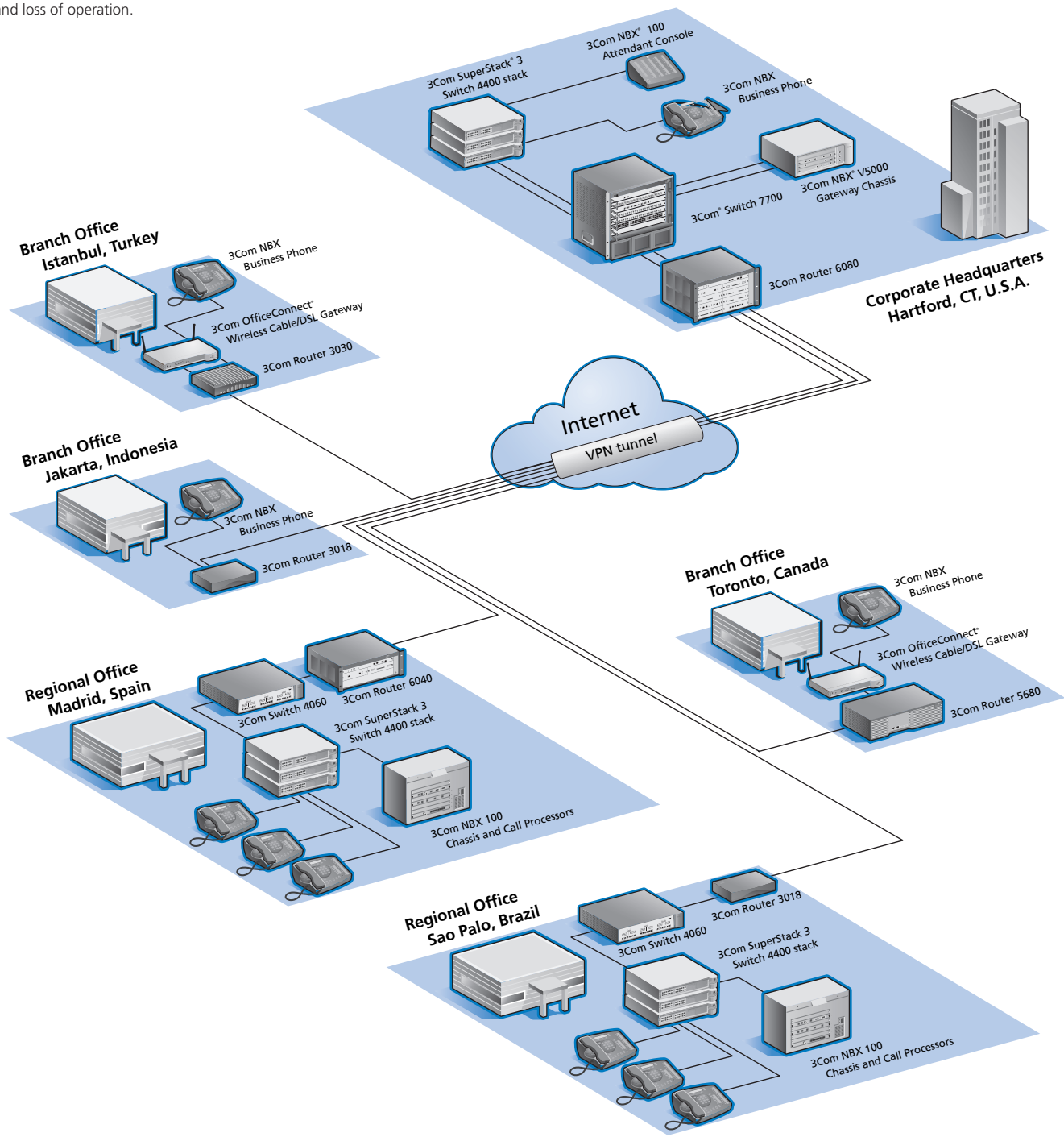
FEATURE	BENEFIT	3COM ROUTER 6000 FAMILY
WAN Routing	• Comprehensive support for standards-based WAN and LAN interfaces and protocols ensures easy integration with the widest variety of public and private networks	• Serial, E1/E3, T1/T3, ATM, ISDN, ADSL, Frame Relay, X.25, PPP, Ethernet, Fast Ethernet • Copper and optical interfaces • IP, IPX, OSPF, BGP-4, IS-IS (IP), Static Routing
Security	• Protection of corporate data, assets and resources • Security from unauthorized access • Secure access for authorized entities	• VPN: L2TP, GRE, IPSec • MPLS VPN: L2 and L3 • Stateful packet inspection firewall, ACLs, NAT, DoS blocking • AAA, RADIUS, PAP/CHAP
Management	• Ability to securely manage and control across the enterprise • Remote diagnostics and reporting	• 3Com Router Manager†, CLI • SNMP v 1, 2 and 3, Telnet, SSH, Rlogin • Info Center (diagnostic tool)
Voice/Data Support	• Effective management of voice and real-time traffic delivers top-quality transmission • Assured availability of bandwidth for key applications	• IP QoS (CAR, LAR, GTS, FIFO, PQ, CQ, WFQ, WRED, LLQ); IEEE 802.1p • Multicast routing protocols (IGMP, PIM-SM, PIM-DM) • IEEE 802.1Q VLAN, Inter-VLAN Routing
Resilience	• Minimize downtime • Redundant links, routers and extra band-width ensure resilience in the face of potential service disruptions	• Hot-swap power, fan and FIC modules • N+1 power supply module backup • VRRP (Virtual Router Redundancy) • Backup Center (Configuration / Port) • Dial Control Center

† Included with 3Com Network Director and 3Com Network Administrator, available as an optional purchase

Secure Connectivity with 3Com Routers

Powerful routing and security features, such as VPNs, ensure safe transport of confidential voice and data content across the public Internet.

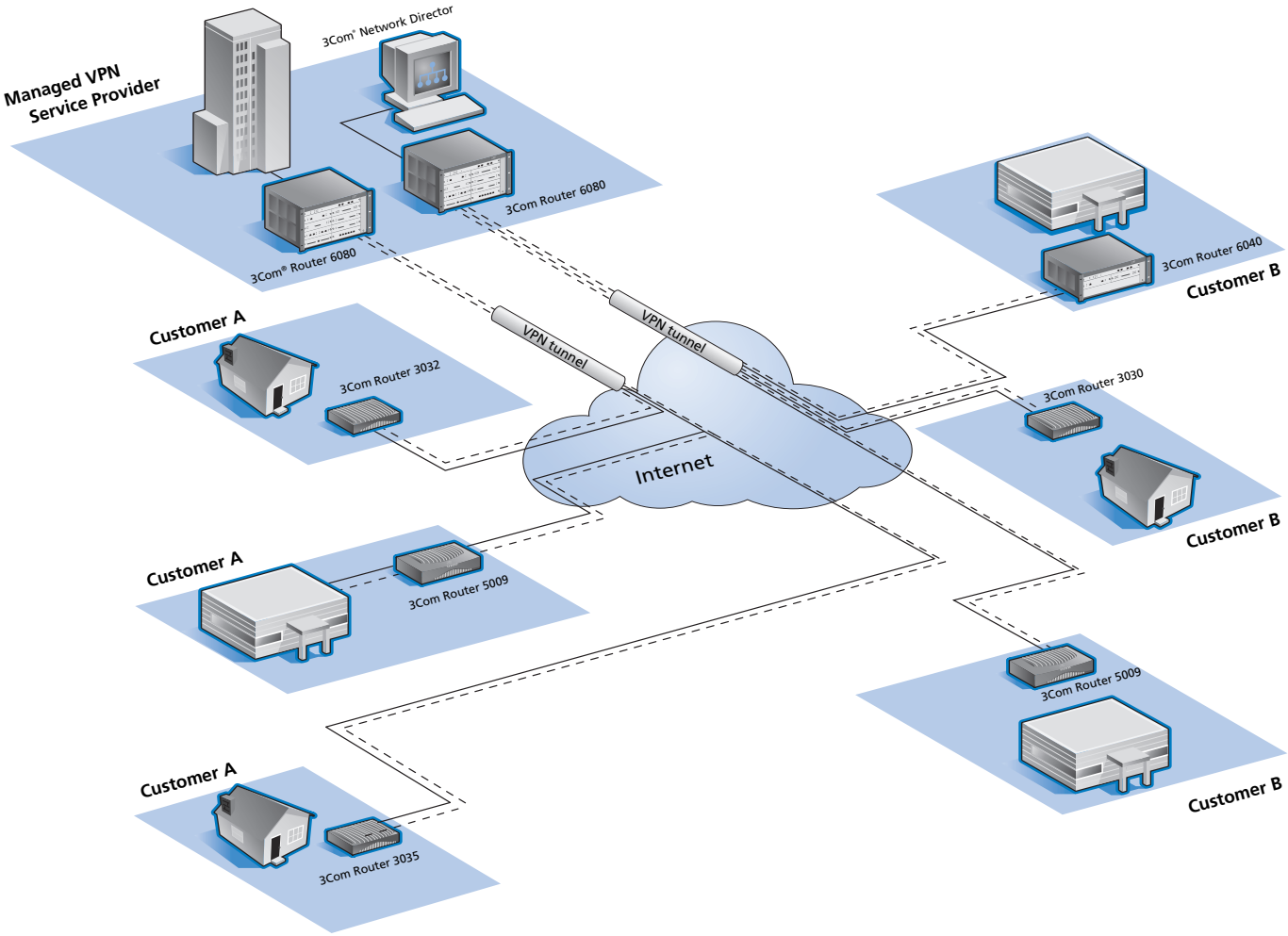
The stateful packet inspection firewall with advanced access control lists prevents unauthorized access to the corporate network and facilities. Denial of Service blocking protects businesses from malicious attacks and loss of operation.



3Com Routers in a Managed Network

Service providers can implement 3Com routers as part of a managed service offering that includes VPN, remote access, and site-to-site connectivity across private networks or the public Internet.

3Com Network Director, used for secure in-band and out-of-band management and diagnostic capabilities, provides the necessary tools to quickly deploy and isolate problems and reduce downtime. Router bulk-updating of remote router code, configuration backup, auto-trap setup and monitoring, and router system status and historical reporting allow quick deployment and maintenance of remote router installations.



Specifications

Ports and slots

Router 6040:
One Router Processing Unit slot
Four FIC slots
One spare power supply slot

Router 6080:
One Router Processing Unit slot
Eight FIC slots
One spare power supply slot

Router Processing Unit:
Two 10BASE-T/100BASE-TX ports
One Console Port
One AUX Serial Port

Processor
733 MHz

Memory
Boot ROM: 512 KB
SDRAM: 512 MB
Flash: 32 MB

Dimensions

Router 6040:
Height: 130.5 mm (5.1 in)
Width: 436.2 mm (17.2 in)
Depth: 420.0 mm (16.5 in)
Weight: 17.5 kg (38.6 lb)

Router 6080:
Height: 219.5 mm (8.6 in)
Width: 436.2 mm (17.2 in)
Depth: 420.0 mm (16.5 in)
Weight: 27.5 kg (60.6 lb)

Power Supply
Input Voltage and Maximum Power Consumption:
Router 6040: 100 to 240 VAC, 240W
Router 6080: 100 to 240 VAC, 320W
AC Line Frequency 50/60 Hz

Environmental Requirements
Storage temperature: -40°C to +70°C
Operation temperature: 0°C to +40°C
Humidity Range: 5% to 90%

MTBF
Router 6040: 54 years (473,000 hours)
Router 6080: 53 years (468,000 hours)
Router 6000 PSU: 138 years (1,207,000 hours)
FICs:
3C13860: 151 years (1,323,000 hours)
3C13861: 389 years (3,413,000 hours)
3C13862: 136 years (1,191,000 hours)
3C13821: 119 years (1,042,000 hours)
3C13823: 112 years (984,000 hours)
3C13863: 157 years (1,376,000 hours)
3C13864: 95 years (832,000 hours)
3C13866: 112 years (985,000 hours)
3C13870: 119 years (1,042,000 hours)
3C13872: 143 years (1,252,000 hours)
3C13882: 255 years (2,239,000 hours)
3C13884: 126 years (1,108,000 hours)
3C13886: 126 years (1,108,000 hours)
3C13888: 199 years (1,744,000 hours)
3C13889: 192 years (1,681,000 hours)

Regulatory Compliance
CE Mark for European Union, Council Directive 99/5/EC

Safety
UL 60950 3rd Edition
CAN/CSA-C22.2 #60950
EN 60825-1, 60825-2, 60950
IEC 60950
AS/NZS60950: 2000

Emissions
CISPR 22 Class A
EN55022 Class A
FCC Part 15, CFR 47 Class A
ICES-003 Class A
AS/NZS CISPR22 Class A
VCCI V-3 Class A

Immunity
CISPR 24
EN 55024
EN 61000-3-2
EN 61000-3-3
EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN 61000-4-11

Warranty Terms
Hardware: 1 year
Software: 90 days
See *www.3Com.com/warranty* for details.

Management
3Com Network Director
3Com Network Administrator
3Com Network Supervisor
3Com Router Manager†
SNMP management

† Included with 3Com Network Director and 3Com Network Administrator

3Com products are well engineered and rigorously tested to ensure compliance with relevant standards. 3Com Router 6000 families, running the currently available operating system v 1.2, were tested by 3Com against the Cisco 2600, 3600, 3725, and 3745 routers, running one of Cisco's operating system versions 12.2 (12c), 12.2 (12g), or 12.3 (x), in July 2004. Results support our claim of standards compatibility for those protocols, features, models, and software versions tested. Not all routing protocols, features, models, and software versions were tested; details of testing parameters and results can be found at www.3com.com/router_test.

Ordering Information

PRODUCT DESCRIPTION	SKU
3Com Router 6040 *3Com Router 6040 chassis, 4 FIC slots, 1 power supply, fan module*	3C13840
3Com Router 6080 *3Com Router 6080 chassis, 8 FIC Slots, 1 power supply, fan module*	3C13880
Router Processing Unit must also be ordered separately for each chassis: **3Com Router Processing Unit** *2 x 10/100 ports*	3C13804
3Com Router 6000 Power Supply *Spare / redundant power supply*	3C13801
LAN Flexible Interface Card (FIC) Modules	
3Com Router 1-Port 100 Mbps FX MM FIC *1-port 100BASE-FX interface module; multi-mode fiber, SC connector*	3C13860
3Com Router 2-Port 10/100 Mbps FIC *2-port 10BASE-T/100BASE-TX interface module*	3C13861
3Com Router 1-Port 100 Mbps FX SM FIC *1-port 100BASE-FX interface module; single-mode fiber, SC connector*	3C13862
WAN Flexible Interface Card (FIC) Modules	
3Com Router 4-Port Fractional T1 FIC *4-port Fractional T1 interface module*	3C13821
3Com Router 4-Port Fractional E1 FIC *4-port Fractional E1 interface module*	3C13823
3Com Router 4-Port Enhanced Serial FIC *4-port Sync/Async serial interface module*	3C13863
3Com Router 8-Port Enhanced Serial FIC *8-port Sync/Async serial interface module*	3C13864
3Com Router 4-Port Channelized E1/PRI FIC *4-port E1/CE1/PRI interface module*	3C13866
3Com Router 4-Port Channelized T1/PRI FIC *4-port T1/CT1/PRI interface module*	3C13870
3Com Router 2-Port ADSL FIC *2-port ADSL interface module (ADSL over POTS – Annex A)*	3C13872
3Com Router 1-Port OC-3 ATM, MM FIC *1-port OC-3 ATM interface module; multi-mode, SC connector*	3C13882
3Com Router 1-Port OC-3 ATM, SM FIC *1-port OC-3 ATM interface module; single-mode (15km distance), SC connector*	3C13884
3Com Router 1-Port OC-3 ATM, SML FIC *1-port OC-3 ATM interface module; single-mode long reach (30km distance), SC connector*	3C13886
3Com Router 1-Port Channelized E3 FIC *1-port Channelized E3 interface module*	3C13888
3Com Router 1-Port Channelized T3 FIC *1-port Channelized T3 interface module*	3C13889

PRODUCT DESCRIPTION	SKU
Cables *(3 meters in length, unless otherwise noted)*	
3Com Router T1 Cable *T1- RJ45 to RJ45*	3C13674
3Com Router E1 BNC Cable *E1 – 75 ohm/2.55 mm-DB-15M to 2 x BNC 75 ohm; 20 meters*	3C13675
3Com Router E1 RJ45 Cable *E1 – 120 ohm/0.32 mm-DB-15M to RJ-45; 20 meters*	3C13676
3Com Router G.703 Cable *G.703 – 120 ohm/0.32 mm-DB-15M to RJ-45*	3C13677
3Com Router X.21 DTE Cable- Enhanced *X.21 DTE Cable – DB-28M to X.21M*	3C13681
3Com Router X.21 DCE Cable- Enhanced *X.21 DCE Cable – DB-28M to X.21F*	3C13682
3Com Router V.24 DTE Cable- Enhanced *V.24 DTE Cable – DB-28M to V.24M*	3C13683
3Com Router V.24 DCE Cable- Enhanced *V.24 DCE Cable – DB-28M to V.24F*	3C13684
3Com Router V.35 DTE Cable- Enhanced *V.35 DTE Cable – DB-28M to V.35M*	3C13685
3Com Router V.35 DCE Cable- Enhanced *V.35 DCE Cable – DB-28M to V.35F*	3C13686
3Com Router T3/E3 Cable *E3/T3 Cable – 75 ohm, SMB to BNC; 15 meters*	3C13687

SERVICE

3Com recommends a 3Com Express℠ service contract for the Router 6000 family, which provides telephone technical support, hardware replacement, and software upgrades to ensure that any technical issues are resolved quickly and efficiently. Express support is available with 8x5 or 24x7 response time options for telephone support. Choose next-business-day or 4-hour response for advance hardware replacement. Availability may vary by geographic location.

Order 3Com Router Installation service to ensure a successful result, faster deployment, and minimize the risk of disruption to your business.

3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064

To learn more about 3Com solutions, visit www.3com.com. 3Com Corporation is publicly traded on NASDAQ under the symbol COMS.

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